

Town Of



AMHERST *Massachusetts*

OFFICE OF THE SUPERINTENDENT OF PUBLIC WORKS
586 SOUTH PLEASANT STREET
AMHERST, MA 01002
TEL. 413-259-3050 FAX 413-259-2414

DEPARTMENT OF PUBLIC WORKS Fiscal Year 2011

Below is the annual report for the Amherst DPW.

The highlights for this year are:

Town Meeting authorized the \$ 4.5 million dollar paving bond. The bond issue will pay to repave many of the major streets in Amherst. Work began on this project and will continue into to FY 12.

The Non-union employees, who include the Working Foremen, engineering staff and the Division Directors, received a zero percent cola this year.

I would like to mention the retirement of Fred Felton this year. Fred was the Mechanic Foreman at the Waste Water Treatment Plant (WWTP) for 20 years after working many years in the private sector. Fred was known for his ingenuity and talents. He and his crew worked on various systems in Town in addition to his work at the WWTP. I as well as the rest of the DPW wish Fred a happy and long retirement.

Respectfully submitted,

Guilford B. Mooring II, P.E.
Superintendent of Public Works

CONSTRUCTION AND MAINTENANCE

The personnel of the Highway Division in addition to their normal maintenance completed the following projects during FY 11:

HIGHWAY RESURFACING:

The DPW has begun paving the roads included in the \$4.5 million Road resurfacing bond.

TRANSPORTATION IMPROVEMENT PROGRAM (T.I.P.)

The following TIP projects are underway this year:

Construction of the Atkins Corner Intersection improvements
Route 116 Resurfacing Project Design (ARRA funding)
University Drive Corridor improvements
Design of Main Street Bridge Replacement (Mass Highway)

SANITARY SEWER DIVISION

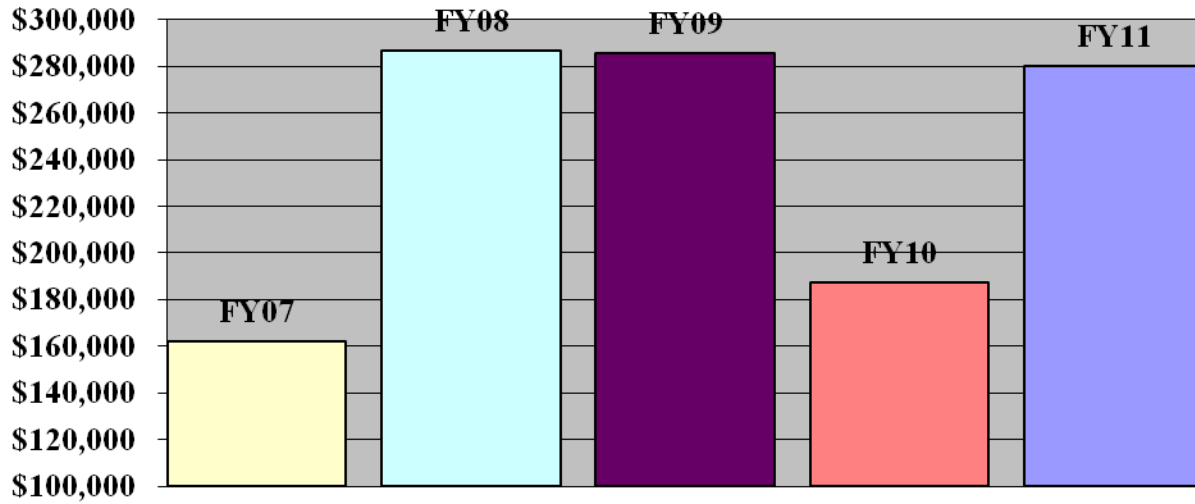
SEWER MAINTENANCE

Investigated 79 sanitary sewer complaints and corrected 12 stoppages in the collection system. Problematic sewer locations are flushed and cleaned on a quarterly basis. The DPW in conjunction with Dukes Inc, chemically treated 4,445 feet of sewer line for root intrusion.

Kenneth Isabelle, Highway Division Supervisor

SNOW AND ICE REMOVAL

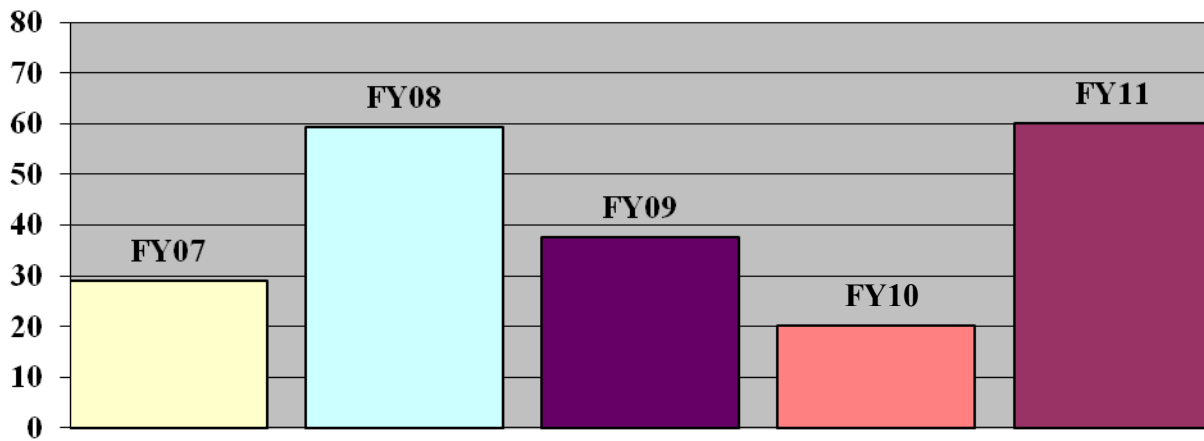
Annual Expenditure



There were 31 snow and ice storms, with a total of 60 inches of snow.

--- 4,474 tons of sand was used. 1,626 tons of salt was used.
 4,500 gallons of Ice Band Magic were used on the roadways and sidewalks.

Inches of Snow



Year	Cost	Snow (inches)	No. of Storms
FY 07	\$161,930	28.9	15
FY 08	\$286,777	59.3	23
FY 09	\$285,733	37.5	23
FY 10	\$187,455	20.2	22
FY 11	\$280,081	60.0	31

TREE AND CEMETERY DIVISION

The Tree Division removed a total of 64 street trees during the past year. Trees removed were: 4 spruce, 7 red maple, 15 sugar maple, 3 maple, 13 white pine, 1 black gum, 4 birch, 1 elm, 3 white spruce, 3 ash, 1 linden, 1 catalpa, 1 white oak, 1 sumac, 4 black oak, 1 pin oak, and 1 cherry

During FY 11, 14 trees were planted and 33 tree stumps were removed .

In addition to tree care responsibilities this department consisting of three full-time employees and one part-time summer employee is also responsible for the care and maintenance, including burials at the West, North and South Cemeteries.

Burials in FY 11

West Cemetery	2
North Cemetery	4
South Cemetery	7

PARKS DIVISION

The Parks Division of five full-time employees and two part-time summer staff continue the day-to-day maintenance of our parks and commons, together with the maintenance of twenty-three softball, baseball, football, lacrosse and soccer fields and many multi-purpose areas

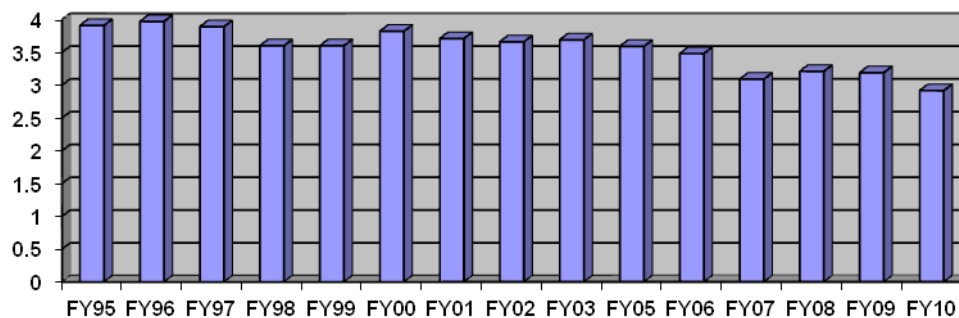
Special Projects: No large special projects were worked on this year do to funding.

WATER TREATMENT & DISTRIBUTION

Water Consumption: The average daily water consumption for FY 11 was 2.971 million gallons; the peak day, July 9, 2010 was 4.233 million gallons. The total FY 11 rainfall was 49.59 inches well over the annual average of 42 inches. The summer of 2010 was very dry.

The figures below summarize the amount of water pumped, the revenue generated and the chemicals used to treat the water. Chlorine, ozone and ammonia are used for disinfection. Potassium permanganate is used for iron and manganese removal at Well #4. Polymer is used for water treatment at the Atkins and Centennial water treatment plants. Fluoride is added at a level of 1 part per million to reduce tooth decay and sodium hydroxide is used to elevate the pH of the water for corrosion control.

DAILY WATER CONSUMPTION IN MILLION GALLONS



Water Services

	FY 09	FY 10	FY 11
New services installed	18	13	6
Total water services	6,243	6,256	6,262
# Meters Replaced	330	195	271
Hydrants Replaced/Repair	96	38	15/31
Water Main Breaks	23	14	14

Chemical Usage - All Sites

Chlorine (lbs.)	18,809	20,624	17,292
Sodium Hydroxide (Gals)	15,811	13,489	13,400
Polymer (gals)	2,880	2,949	2,323
Potassium Permanganate (lbs.)	1,290	391	1,900
Ammonia (lbs.)	3,703	4,234	3,077
Sodium Fluoride (lbs.)	17,705	18,410	17,170
Ozone	0	0	0

Monthly Finished Water Pumping in Million Gallons			
Month	FY 09	FY 10	FY 11
July	98.008	89.069	98.970
August	104.836	90.656	93.881
September	112.120	98.704	107.156
October	105.195	102.040	96.427
November	96.835	88.073	91.541
December	90.625	86.062	81.683
January	84.639	79.976	84.119
February	90.614	82.954	89.747
March	92.500	83.717	86.646
April	103.806	91.920	90.929
May	101.620	91.275	85.152
June	82.668	79.886	78.009
Total	1163.466	1,064.330	1,084.260
Daily Average	3.188	2.916	2.971
Maximum Daily	4.505	3.739 (10/31/2009)	4.233 (7/9/2010)
Minimum Daily	2.149	1.946 (12/25/2009)	1.769 (12/25/2010)

Water Pumped By Source - Million Gallons

Source	FY 09	FY 10	FY 11
Wells #1 & #2	191	187	174
Well #3	327	245	252
Well #4	93	32	143
Well #5	3.5	.9	10
Pelham Reservoirs	300	275	242
Atkins Reservoir	246	322	263
Total Water Pumped	1,163	1,064	1,084
Average Daily (millions)	3.188	2.916	2.971

* Quantity adjusted for meter error 200 gpm

Water Billed – Cubic Feet

	FY 09	FY 10	FY 11
UMass	40,493,000	36,752,100	40,068,300
Amherst College	5,904,600	5,565,900	5,485,700
Hampshire College	2,616,900	2,278,200	2,285,000
Town	67,690,700	63,918,900	72,372,900
Municipal	1,005,800	974,600	883,500
Special Water Readings	258,700	214,700	130,500
Other –Reuse, Misc	2,744,817	2,803,000	2,914,200
Un-metered Use	10,020,312	---	---
Adjustments (minus)	(1,076,100)	(183,900)	(190,100)
Total Metered (ft³)	129,658,731	112,323,500	123,950,000
Total Metered (million gals.)	970	---	---
% Unaccounted	16%	---	---

*Adjusted for meter error

Total Revenue Rounded– Dollars

	FY 09	FY 10	FY 11
UMass Water	\$1,290,442	\$1,217,432	\$1,326,887
Sewer	\$1,244,796	\$1,194,343	\$1,302,308
Amherst College Water	\$191,855	\$186,546	\$183,599
Sewer	\$183,136	180,950	\$178,363
Hampshire College Water	\$84,759	\$76,194	\$76,534
Sewer	\$81,161	\$74,074	\$74,311
Town Water	\$2,302,009	\$2,165,826	\$2,411,681
Sewer	\$1,985,321	\$1,904,105	\$2,092,969
Municipal Water	\$36,258	\$36,255	\$33,250
Sewer	\$31,152	\$31,577	\$28,568
Special Reading Water & Sewer	\$72,950	\$13,637	\$8,534
Abatements Water & Sewer	(\$75,071)	(\$20,367)	(\$28,731)
Other Water & Sewer	\$9,240	\$184,019	\$189,221
Total Revenue	\$7,438,007	\$7,244,592	\$7,877,494

WATER QUALITY DATA:

Bacterial Samples: Bimonthly samples were analyzed from 24 DEP approved sites around Town. In October, 2010, one sample was positive for E.Coli bacteria in North Amherst.

Fluoride: Fluoride was added to all sources at a level of 1.0 ppm to prevent tooth decay.

Treatment Plant Performance: Both the Atkins and Centennial (Pelham) Water Treatment plants produced water that meet the requirements set by the Environmental Protection Agency (EPA). The average turbidity from Atkins was 0.10 N.T.U. and from Centennial 0.09 N.T.U. The EPA requires that these readings be less than 0.3 N.T.U. in 95% of the samples. Total Trihalomethanes, a byproduct of chlorine disinfection, averaged 35.4 ppb from quarterly sampling at eight different sights around town. The EPA limit is 80 ppb. Haloacetic acids, another by product of chlorine disinfection, were also analyzed quarterly at 8 different locations and the average value was 18.0 ppm, well below the EPA limit of 60 ppm.

Water Rate: The water rate for FY 10 was \$3.30 hundred cubic feet (HCF).

Information: More information about water treatment and quality can be accessed on line at www.epa.gov or www.mass.gov and search for drinking water.

Cross Connection Program: The cross connection program was established in 1989 under Massachusetts Drinking Water Regulation 310 CMR 22.22 to prevent cross contamination of the water supply with hazardous substances. Water department staff tests these devices twice annually.

	Total Backflow Devices		
	FY 09	FY 10	FY 11
Town	58	54	61
UMass	447	425	498
Amherst College	110	106	104
Hampshire College	33	34	32
Commercial	131	126	157
Residential-Irrigation	60	41	51
Total	839	786	903

Chemical Analysis: The following water tests were recently analyzed and all levels of substance in the water were below the Maximum Contaminant Level set by the Safe Drinking Water Act. More information is available online at www.amherstma.gov, go to department – water – ccr.

- Volatile Organic Compounds – Solvents, Petroleum Products
- Inorganic Compounds – tested annually at all sources
- Fluoride – Daily at all sources
- Synthetic Organic Compounds – Herbicides and pesticides - 2006 at all sources
- Arsenic
- Perchlorate
- Radioactive Substances
- Lead and Copper

WASTEWATER TREATMENT PLANT

The Wastewater Facility is a secondary treatment process that continues to produce clean effluent to the Connecticut River. Pumping Stations (20) assist in getting the wastewater to the facility are healthy and well maintained. Construction of the facility was completed in 1978 nearly all major equipment has been upgraded for energy savings. The FY 11 sewer rate is \$3.25 per hundred cubic feet (750 gallons) used. Amherst average household cost is approximately \$390 per year.

Flow Data

The Wastewater Treatment Plant treated 1.45 billion gallons of wastewater in FY 11. The average daily flow was 3.97 million gallons. The highest flow to the plant in one day was 14.8 million gallons on 3/07/2011. The lowest flow was 2.26 million gallons on 7/04/2011.

	FY 09	FY 10	FY 11
<u>Inches of Rainfall</u>	51.69	45.15	49.59
Average Daily Flow in Million Gallons	4.28	3.91	3.97
Highest Day, Total in Million Gallons	(12/12/08) 9.99	(3/30/10) 9.43	(03/04/11) 14.8
Chemicals Used			
Chlorine (lbs.)	12,496	9,465	11,100
Polymer (lbs.)	3,079	3,176	3,130
Potassium Permanganate (lbs.)	1,705	2,750	3,520

Chlorine is used to disinfect the clean effluent prior to discharge into the Connecticut River and occasionally for controlling undesirable organisms in our treatment process. Polymer is used to thicken sludge prior to disposal. Potassium Permanganate is used for odor control associated with sludge processing.

Treatment Efficiency

Wastewater is tested in our lab. A few specialized tests are contracted out. Wastewater is tested as it enters the facility, after Primary Treatment and finally the cleaned effluent as it exits the facility. Many process control tests are performed to optimize treatment and produce the

best quality effluent possible. The Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (DEP) monitor our activities and measure our effectiveness by the parameters listed below (annual averages).

Parameter	EPA Limit	FY 09	FY 10	FY 11
Biochemical Oxygen Demand (mg/L)	25	3.0	3.0	4.0
Total Suspended Solids (mg/L)	30	4.0	3.0	4.0
Chlorine Residual (mg/L)	1.0	.53	.51	.46

Septage Received

The treatment plant receives septage from residential septic tanks pumped from the towns of Amherst, Pelham and Shutesbury. Below is a summary of the number of septic tanks (usually 1000 gallons) that were pumped.

Town	FY 09	FY 10	FY 11
Amherst	135	136	114
Pelham	52	53	46
Shutesbury	93	110	87
Total	279	299	247

Wastewater Reuse

The University of Massachusetts presently takes approximately 120 gallons per minute of our clean effluent, performs advanced treatment, then uses it as boiler make-up water at their Central Heating Plant to reduce their demand for Amherst water.

	FY 09	FY 10	FY 11
Million Gallons	65	55	40

Sludge Data

Sludge is the residual organic material left after the wastewater is treated. We currently thicken these solids on-site, and Casella Waste Management is under contract to deliver the liquid sludge to an EPA-approved sludge incinerator. Sludge in FY 11 was transported to three incineration facilities: Fitchburg, MA; Millbury, MA; and Naugatuck, CT.

Sludge Data	FY 09	FY 10	FY 11
Total Gallons (transported)	3,970,600	3,889,900	3,856,100
Total Dry Tons	1,130	1,054	1,074
% Solids	6.9	6.5	6.7

Month	Total Gallons	Ave. % Solids	Total Dry Tons	Dry Tons Per Day
July	215,500	7.3	65.15	2.10
August	193,000	7.0	55.63	1.79
September	360,000	6.8	101.35	3.38
October	369,000	6.9	106.06	3.42
November	386,000	6.7	106.40	3.55
December	332,500	6.7	93.31	3.01
January	255,300	6.8	72.44	2.34
February	358,600	6.7	99.81	3.56
March	393,700	6.8	113.58	3.66
April	401,500	6.3	104.50	3.48
May	342,500	6.4	90.66	2.92
June	248,500	6.4	65.57	2.19
Total	3,856,100	---	1,074.48	---
Average	321,342	6.7	89.5	2.95

Power Consumption

	FY 09	FY 10	FY 11
<u>Avg. kWh/month</u>	110,850	93,811	72,487
<u>Avg. kW Demand</u>	222	197	162
<u>KWH/Million Gallons</u>	851*	797*	604*

*A survey of 279 treatment plants done in 2004 puts Amherst in the lowest 10% for electric use per million gallons of treated water.

Special Activities:

- A. High efficiency motors and/or variable frequency drives were installed as upgrades to four existing waste activated sludge pumps and four return activated sludge pumps by in-house staff.
- B. New scum baffles and skimmers were replaced in-house on three circular final clarifier tanks.
- C. Staff replaced three major valves on the plant water system for reuse water at the treatment plant.
- D. Sewer collections staff videoed all sewers for repair needs prior to road paving projects.
- E. Two mechanical aerators were dismantled with cutting torches to create room for FY12 upgrades for adding oxygen to the activated sludge process more efficient.
- F. A contractor was hired to sand blast and paint final clarifier #2 rake drive and bridge.
- G. Sewer collections staff completed "Cure in Place" repairs to sewer lines on Walnut, South Lincoln, Main, Woodside and Justice Drive. This type of repair is made from above ground with no digging required.
- H. The DPW's Electrical Division continues to upgrade control systems for equipment and process control.

James Laford
Division Director/Wastewater

SOLID WASTE AND RECYCLING

Funding challenges continue as hauling and disposal costs increase and available state grant money continues to wane. As an example, in 2001 Amherst received \$58,000 from a Department of Environmental Protection (DEP) recycling incentive program, in addition to income from the landfill and DEP grants (if any). Ten years later the state incentive program (which ran for five years) is defunct, as is the Municipal Waste Reduction grant program, and we are faced with rising disposal fees, antiquated equipment, and maintenance costs from two capped landfills. While progress continues in community education about waste stream reduction, the future of Amherst's solid waste program is uncertain.

Grants

The Springfield Materials Recycling Facility (MRF) Advisory Board awarded the Town \$1,3600 for the purchase of collection bins and the production of new signs for the Transfer Station. 33 corrugated plastic trash, compost and recycling bins were purchased from Numatech (CA) for use at public events on the Common. They will also be made available to other even organizers on a loan basis. As of July 1, 2011 the Transfer Station signs have not been made as the DPW's sign maker was on a leave of absence.

The Massachusetts Department of Environmental Protection (DEP) did not offer Municipal Waste Reduction (MWR) grants this year due to lack of funds. A new grant program, Sustainable Materials Recovery (SMRP) commenced using resources from the sale of state waste energy credits. Funding is available for (DEP designated) priority and pilot program implementation, regional initiatives and targeted small-scale initiatives. Unless our needs mesh with the annual priorities identified by DEP, there is no hope of substantial grant funding from this program.

Outreach and Public Education

School Composting Program – Fort River Elementary School began composting in August 2010. Principal Ray Sharick had a special sorting countertop constructed and organized a group of parents to act as compost coaches at the start of the school year. Food waste from Fort River and Wildwood Schools is collected weekly by TTT Trucking (Brattleboro, Vermont), who hauls it to Martin's Farm in Greenfield, MA.

A reorganized composting program began at Crocker Farm Elementary School in October. Because of last year's perceived issues, only paper, fruits and vegetables are collected and composted on-site. A load of bagged leaves was delivered and placed under a tarp behind the composting unit for a source of carbon. Sixth graders took the compost bucket out to the bin daily after lunch. During winter months a path was cleared and snow accumulation removed from the structure to ensure accessibility. The program was quite successful, the primary challenge being that the kids did not always place leaves on top of the food waste—which is important chemically and averts unwanted visitors and the proliferation of flies. In early November we organized a "Jack-o-Lantern Roundup" to collect additional organic waste for the compost bin.

The school district's food service contractor continues to utilize compostable (sugar cane fiber) trays when washable trays are not used. We are grateful as expanded polystyrene foam trays can be purchased at a fraction of the cost. Schools with compost pick-up arrangements are able to add the trays to their compost dumpster, greatly reducing their trash volume.

Trash Free Lunch Day – A mere 18 ounces of trash was the combined total from all three elementary school cafeterias during the fifth annual "Trash Free Lunch Day" on April 15, 2011. This is an 80% reduction over last year. School trash volume at the schools ranged from .06 to 1.18 cubic inches per student. Paul Stavros, owner of the Subway Restaurant on Main Street, donated three six-foot submarine sandwiches and a classroom raffle was held at each school.

School Cleanout – Handouts detailing the types of recyclable paper were distributed to Amherst schoolteachers prior to June's school cleanout week. The goal was to ensure that the more recent recycling changes were known (e.g. staples, paperclips, plastic & metal spiral bindings do not need to be removed). Via special arrangement with the Springfield Materials Recycling Facility, hard-cover books in small quantities were accepted in the paper recycling mix for the month of June.

Earth Day Newspaper Insert – This was the fourth year the insert was distributed in the Hampshire Gazette, the Amherst Bulletin, and the Franklin County Recorder during Earth Day week. The insert contains information regional hazardous waste collection events, community recycling contacts, donation and commercial reuse opportunities and an extensive household disposal reference guide. This year an employee from the Hitchcock Center developed the children’s activity page.

Amherst Sustainability Festival – Despite extensive planning, the April 23rd festival was pretty much rained out this year. Some hardy vendors stayed for the duration and some hardy participants attended, but it was far less successful than 2010 event. This year the Eco-Hero Hunt commenced on the weekend before the Festival, and ended at 4pm the day of the Festival.

Taste of Amherst – 2011 was the 20th anniversary of the Taste of Amherst. Event organizers had conversations with UMass about providing sponsorship for the 20th Taste of Amherst in the form of compostable flatware, but it did not come to pass. Restaurants were again encouraged to avoid use of expanded polystyrene (foam) plates and bowls. PepsiCo, the organization that provides the refrigerators and furnishes drinks for the event, again failed to provide recycling bins this year. The DPW filled the void with the new corrugated plastic collection bins from the MRF grant.

Drug Take Back – The Health and Police Departments, in conjunction with the Federal Drug Enforcement Administration, conducted a free Drug Take Back collection event on April 30. Residents were invited to bring old medications to Wildwood School from 10am-2pm, no questions asked. Excluded from the collection were syringes, lancets, thermometers, I-V bags, chemo drugs and liquids of any type.

Additional Initiatives

Regional Organics Waste Management – The Pioneer Valley Planning Commission (PVPC), along with a panel of state and local solid waste professionals, completed an evaluation of the costs and benefits of increasing food waste composting infrastructure in the central Pioneer Valley. The group was awarded a grant from the Department of Environmental Protection to establish a matchmaking service for composting facilities and organic waste generators in the Pioneer Valley. After the discovery that New England Organics is working on an anaerobic digestion project with Barstow’s Longview Farm in Hadley, the scope of the grant was changed to focus on potential collection and hauling routes to channel area food waste to Barstow’s digester.

Proposed Use of Old Landfill Site – Proposed placement of an income-producing solar installation on the site of the old landfill (across from Transfer Station at 740 Belchertown Road), became controversial when several Amherst Woods residents overlooking the site (which now appears meadow-like) strongly opposed the project. What started as a handful of neighbors launching a flyer and web-based campaign escalated into a law suit after a Town Meeting voted on May 16 to allow the Town Manager to sign a contract so that the exploration phase could start. As of June 30, 2011 the project is stalled until legal matters are settled. As the grant opportunity which made the project financially viable is ending, it is expected that this venture will be unsuccessful.

Amherst’s Solid Waste Future

As the two regional landfills (Northampton and South Hadley) to which DPW hauls collected municipal and Transfer Station trash are anticipating closure within the next few years, the Town Recycling and Refuse Management Committee has been asked to assist with research and planning for the future.

Waste Collection and Landfill Diversion

Curbside pickup of trash and recyclables in Amherst continues to be provided by private trash haulers, however, households requesting variances are allowed to bring their recycling and trash directly to the Transfer Station in pre-paid bags. This fiscal year 574 households requested trash variances. In spring of 2011, 40,000 bags were purchased for the program at a cost of \$8,360. We anticipate that the supply will last 3-4 years.

Earth Machine composting units, kitchen counter compost pails, recycling bins, and safe needle collection containers continue to be available for purchase at the Transfer Station. Rain barrels from the New England Rain Barrel Company were offered to Amherst residents at the bulk rate of \$72.70 and were delivered to residents by the manufacturer.

In FY 11 medical waste hauler, Stericycle, processed 184 pounds of Sharps collected by Amherst's Health Department and the Transfer Station (July and February pick-ups). The effective date of the Department of Public Health medical waste regulation banning the disposal of home sharps and unopened packaged syringes and lancets generated by households in the regular trash stream is July 1, 2012 (original effective date was July 2010). We anticipate that a statewide Sharps collection program will be launched at that time. Amherst's existing "Safe Needle Disposal Program" will continue until the ban is enacted and an alternate collection program is announced.

The Recycling Center and Transfer Station continues to support other landfill diversion programs. The foam packing pellet and paper egg carton reuse program continues and the following items are accepted at no charge from residents with current vehicle stickers:

- Clothing (goes to Salvation Army)
- Automotive & rechargeable batteries
- Waste automotive oil
- Leaves & grass clippings
- Christmas trees
- Printer cartridges & cell phones
- Mixed containers
- Mixed paper
- Mercury-bearing items such as thermometers & thermostats

The option to donate return deposit drink containers to the local food bank continues with a designated bin. Fluorescent bulbs, brush, electronics, household solid waste (bulky items), construction/demolition waste, scrap metal, asphalt, bricks, concrete, wood, paint, tires, appliances and propane tanks are all accepted for recycling/disposal after payment of associated fees.

The Take It or Leave It and Book Sheds, which allow Vehicle Sticker owners to swap books and household items, remain popular. Parking challenges continue.

A household hazardous waste (HHW) collection event was held on October 9, 2010. Approximately 545 gallons of waste were collected from Amherst residents. The communities of Hadley, Pelham and Shutesbury were invited to partner in the event via a resource/cost-sharing agreement. This year approximately 220 gallons were collected from these communities.

Types and quantities of materials diverted via the Transfer Station over a four-year period are shown in the table below.

	FY 08	FY 09	FY 10	FY 11
Electronics (tons)	30	33	26	28
Scrap Metal (tons)	153	126	115	136
HHW in household equivalents*	156	61	110	45
Paint (gallons)**	1,532	1,443	1,368	1,251
Tires (count)	461	517	277	286
Appliances	609	535	484	510
Propane Tanks	56	53	55	34

*Household equivalent is a unit of measurement in the HHW disposal industry that equals approximately 25 gallons.

**Oil-based paint and paint products known to contain lead are only accepted during HHW collection days.

Conclusion

Waste stream reduction success stories are increasing as San Francisco pursues a zero waste goal and the City of Seattle moves to single stream recycling, bans use of expanded polystyrene and mandates restaurant food waste composting. The City of Springfield is conducting a single stream recycling pilot project, and other local municipalities with tax-supported trash services are expressing interest in following suit. Amherst's challenge remains how to support enterprise fund funded solid waste services with dwindling revenue streams.

Susan Waite, Recycling Coordinator